



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,059	03/15/2001	Markus Probst	ZIP 2216	7274
7812	7590	01/09/2004	EXAMINER	
SMITH-HILL AND BEDELL 12670 N W BARNES ROAD SUITE 104 PORTLAND, OR 97229			LUU, THANH X	
			ART UNIT	PAPER NUMBER
			2878	

DATE MAILED: 01/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/811,059

Applicant(s)

PROBST, MARKUS

Examiner

Thanh X Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 27-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 26, 2003 has been entered.
2. Claims 27-56 are currently pending.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 27, 28, 30-39, 41-43, 45-54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Figure 1), hereinafter AAPA, in view of Pientka (U.S. Patent 5,811,793).

Regarding claims 27, 28, 30-39, 41-43, 45-54 and 56, AAPA discloses (see Figure 1) an apparatus for performing scattered radiation measurements, comprising: an emitting device (1) for emitting radiation; a receiving device (2) for receiving radiation; a window having a first side presented towards the emitting and receiving devices and a second side bounding a volume of fluid (5), the window having a first

window portion through which radiation emitted from the emitting device passes towards a target location that is spaced from the second side of the window and arrives at the target location along a first path, and the window also having a second window portion substantially coplanar with the first window portion and positioned so that radiation leaving the target location along a second path, which is at an angle of about 90 degrees to the first path, passes through the second window portion towards the receiving device, and wherein the emitting device comprises a radiation source. AAPA does not specifically disclose a deflection element positioned to receive radiation from the radiation source and to deflect the radiation towards the first window portion.

Pientka teaches (see the Figure) a similar device having a deflection element (13) as claimed. Pientka further teaches (see the Figure) the deflection element is a reflecting prism having a spherical entry or exit surface and the radiation passing perpendicularly through the entry or exit surface. Also, Pientka teaches (see the Figure) radiation reflected in the interior of the deflection element and the entry or exit surface is curved such that radiation from the radiation source propagates in the deflection element parallel to the optical axis. In addition, Pientka teaches (see the Figure) third and fourth paths as claimed, and an optical deflection element to deflect radiation towards the radiation detector. Pientka further recognizes that such a deflection element allows for the device to provide a more compact configuration. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a deflection element as claimed in the apparatus of AAPA in view of Pientka to obtain a more compact configuration.

5. Claims 27, 39, 40, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Zanardelli (U.S. Patent 4,652,745).

Regarding claims 27, 39, 40, 54 and 55, AAPA discloses (see Figure 1) an apparatus for performing scattered radiation measurements, comprising: an emitting device (1) for emitting radiation; a receiving device (2) for receiving radiation; a window having a first side presented towards the emitting and receiving devices and a second side bounding a volume of fluid (5), the window having a first window portion through which radiation emitted from the emitting device passes towards a target location that is spaced from the second side of the window and arrives at the target location along a first path, and the window also having a second window portion substantially coplanar with the first window portion and positioned so that radiation leaving the target location along a second path, which is at an angle of about 90 degrees to the first path, passes through the second window portion towards the receiving device, and wherein the emitting device comprises a radiation source. AAPA does not specifically disclose a deflection element positioned to receive radiation from the radiation source and to deflect the radiation towards the first window portion. Zanardelli teaches (see Figure 1) the deflection elements as claimed and the radiation source and detector are not in the same plane. Zanardelli further recognizes that such a deflection element allows for the device to provide a more compact configuration. Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a deflection element as claimed in the apparatus of AAPA in view of Zanardelli to obtain a more compact configuration.

6. Claims 29 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Pientka, and further in view of Bendicks (U.S. Patent 5,278,425).

Regarding claims 29 and 44, and, AAPA and Pientka disclose the claimed invention as set forth above. AAPA and Pientka do not specifically disclose the deflection element having a nonplanar aspherical entry surface. Bendicks teaches (see Figure 1 and column 2, lines 56-61) providing a nonplanar aspherical entry surface. Thus, Bendicks recognizes such a curved surface allows for better collimation. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a curved surface as claimed in the apparatus of AAPA in view of Pientka and Bendicks to improve collimation and improve detection.

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 27-56 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is (703) 305-0539. The examiner can normally be reached on Monday-Friday from 6:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta, can be reached on (703) 308-4852. The fax phone number for the organization where the application or proceeding is assigned is (703) 872-9306.


Application/Control Number: 09/811,059

Page 6

Art Unit: 2878

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

txl  
December 30, 2003



Thanh X. Luu  
Primary Examiner